

REMARKS

AMENDMENTS

The Office Action of October 3, 2006 has been carefully considered. Entry of the proposed amendments and reconsideration of this application, as amended, is respectfully requested.

The drawings (FIGS. 1 and 2) were newly objected to because of informalities noted therein relative to reference numeral (2). The Specification has been amended to correct the informality and to indicate that reference numeral 2 refers to the wheels as depicted by the reference numeral in Figures 1 and 2. Applicant respectfully submits that all objections to the drawings identified by the Examiner have been overcome as a result of the amendment. No new matter is added by the amendment to the Specification as the amendment was directed to correcting an informality noted therein. Entry of the proposed amendment is respectfully requested as this is Applicant's first opportunity to address the newly-raised objection, and because withdrawal of the objection is believed to place the application in condition for allowance, or at least place the application in better condition for appeal.

Claims 1, 2, 4, 5, 10, 12 and 13 have been amended to address the informalities specifically noted by the Examiner and to overcome the objections thereto as suggested. Applicant respectfully requests the entry of the proposed claim amendments as such amendments place the claims in condition for allowance, or at least reduce the issues on appeal. The proposed amendments are believed to address informalities that do not result in new matter or require further search. In view of the newly-raised objections, this is Applicant's first opportunity to respond to the Examiner's objection, and the proposed claim amendments should be entered even though presented after final rejection.

REJECTIONS & TRAVERSAL

Claims 1-7 and 11-15 were rejected under 35 USC §103(a) as being unpatentable over Aslanov et al., GB 2198920 ("Aslanov") in view of Kikuchi et al., US 6,072,854 ("Kikuchi"). Claim 8 was rejected under 35 USC §103(a) as being unpatentable over

Aslanov in view of Kikuchi as applied to claim 3, and further in view of Koblenz, US 2,843,749 ("Koblenz"). Claims 9 and 10 were rejected under 35 USC §103(a) as being unpatentable over Aslanov in view of Kikuchi as applied to claim 1, and further in view of Fink et al., US 5,359,640 ("Fink").

Claims 1-7 and 11-15 were rejected under 35 USC §103(a) as being unpatentable over Aslanov in view of Kikuchi. Applicant respectfully traverses the rejection.

Applicant respectfully contends that Aslanov discloses a laboratory diffractometer that permits analysis of samples that are small relative to the stage supporting the sample holder. Rotation of the analytical unit is possible about the equatorial axis, however the position of the centre of the diffractometer and the equatorial axis is fixed. Complete scanning can be performed by rotating the sample holder, and no other movement is believed to be disclosed as desirable by Aslanov. As acknowledged by the Examiner, Aslanov fails to disclose that the means for moving the analytical unit with respect to the base moves the analytical unit to change the position of the equatorial axis with respect to the base, as set forth in claim 1.

The Examiner alleges that it would have been desirable to modify the apparatus of Kikuchi by adding a rotation movement of the plane (equatorial plane) containing the radiation source and the detector (i.e. the analytical unit supporting those components) about an equatorial axis, in view of the fact that the diffractometer of Aslanov permits such a rotation. Applicants respectfully submits that such a position is unsupported.

Kikuchi discloses an apparatus for performing analysis on a very specific kind of sample, i.e. cylindrical ingots of silicon monocrystals (Abstract lines 6-8 and figures). In order to provide the desired measurements, the silicon ingot must be placed on the specimen holder and adjusted to make the irradiated crystal plane vertical, i.e. perpendicular to the plane containing the radiation source and detector. This is done by rotating the ingot about its axis by the rollers whereon it is laid (col. 6, lines 20-24). Then the scanning of the ingot is performed by moving the radiation source parallel to the ingot's surface.

In the apparatus disclosed by Kikuchi, the axis parallel to the ingot's axis, and running on the surface thereof exposed to the radiation source, can be regarded as an equatorial axis. A rotation of the plane containing the radiation source and detector about this axis is neither suggested, nor is it desirable. Such a rotation is useful to perform an analysis

on a polycrystalline material, where the crystalline planes may have different orientations. However, when scanning a monocrystal specimen as described by Kikuchi, in order to exclude the presence of defects, it is necessary that the crystal plane be perpendicular to the plane containing the incident and the reflected radiation. This is the main aim of the Kikuchi arrangement. Kikuchi performs such positioning by a specially constructed specimen holder, which is usable with samples that can be handled, which is the case of the ingots, and no further movement is needed. In other words, the aim of Kikuchi is to perform scanning on a very peculiar kind of sample, and there would have been no reason to combine or modify the movement permitted by the disclosed apparatus in Kikuchi with a rotation about an equatorial axis as recited in the rejected claims, because the analysis on monocrystal samples is possible only when the equatorial plane and the crystal plane are perpendicular. Thus, Applicant respectfully contends that Kikuchi effectively teaches away from the recited limitation, and one skilled in the art would have found no reason to modify any of the cited references in view of the other.

Moreover, the kinds of samples analyzable by the presently claimed invention and the variety of analyses that can be performed, including those enabled by the ability to change the position of the equatorial axis with respect to the base, differ significantly from what is attainable by the Kikuchi apparatus. Applicant further urges that, in view of the disparate teachings of Aslanov and Kikuchi, any combination between the two documents is untenable.

Finally, as further indicia of non-obviousness, Applicant respectfully submits that neither Aslanov or Kikuchi teach or suggest the problem solved by the claimed invention - performing analysis on specimens or articles of manufacture that are in service and that cannot be moved from their place of use or cannot be mechanically connected to an analysis apparatus (e.g., Field of Invention; Specification p. 1, lines 3-8). The fact that there is no need that the specimen under investigation be mechanically connected to the analytical unit, is among one of the advantages enabled by the multi-axis movement capability set forth in the presently claimed invention.

In view of the arguments set forth herein, Applicant respectfully contends that *prima facie* obviousness has not been established in that the references relied upon are not properly combined. Furthermore, there is no evidence, other than the recited limitations

of the claimed invention, to suggest the alleged combination/modification to one of ordinary skill in the art. Moreover, the arguable combination still fails to teach means for moving the analytical unit with respect to the base, or moving the analytical unit to change the position of the equatorial axis with respect to the base, as presently recited in amended claims 1 and 12. Accordingly, the rejection is respectfully traversed and Applicant seeks an indication of the allowability of independent claims 1 and 12.

For purposes of brevity, the further distinctions set forth in the rejected dependent claims are not specifically set forth. Applicant respectfully reserves the right to further address such limitations in the event the rejection of claims dependent from claims 1 and 12 is maintained.

Claim 8 was rejected under 35 USC §103(a) as being unpatentable over Aslanov in view of Kikuchi as applied to claim 3, and further in view of Koblenz. Applicant respectfully traverses the rejection, and incorporates the arguments set forth above relative to claim 1 as though fully set forth herein.

Applicant further maintains that the rejection fails to set forth a basis for the proposed combination of Koblenz, to the arguable combination of Aslanov and Kikuchi. More specifically, the Examiner urges that the motivation to include the teachings of Koblenz is based in a desire to improve the signal-to-noise ratio “as implied by Koblenz.” First, Applicant urges that Koblenz’ suggestion of a reduction in the noise level of the apparatus does not seem to be a problem identified by either Aslanov or Kikuchi. What is the Examiner relying on to suggest why one of ordinary skill in the art would seek to further modify Aslanov or Kikuchi to improve the signal-to-noise ratio? Absent such a suggestion, it would appear that the Examiner has used Applicant’s claim limitations as a “recipe” by which elements from unrelated patents are selected for hindsight reconstruction of the claimed invention.

Furthermore, the arguable combination still fails to teach means for moving the analytical unit with respect to the base, or moving the analytical unit to change the position of the equatorial axis with respect to the base, as recited in amended claim 1, from which claim 8 depends. Accordingly, Applicant respectfully submits that *prima facie* obviousness has not been established and further requests that the rejection be withdrawn in favor of the allowance of dependent claim 8.

Claims 9 and 10 were rejected under 35 USC §103(a) as being unpatentable over Aslanov in view of Kikuchi as applied to claim 1, and further in view of Fink. Applicant again traverses the rejection, and incorporates the arguments set forth above relative to claim 1 as though fully set forth herein. Applicant also respectfully maintains that the rejection fails to set forth a basis for the proposed combination of Aslanov in view of Kikuchi and further in view of Fink.

With respect to claim 9, the alleged combination fails to teach means for moving the analytical unit with respect to the base, or moving the analytical unit to change the position of the equatorial axis with respect to the base, as recited in claim 1, from which claim 9 depends. Considering claim 10, the claim is patentably distinguishable from the proposed combination for the reasons previously discussed relative to claims 1 and 9.

Furthermore, Applicant reiterates the belief that the Examiner mis-characterizes the claimed dual-laser configuration as “mere duplication” of the Fink laser. In the Response to Arguments (Final Office Action p. 8), the Examiner suggests that Applicant has not expressly set forth the limitation relied upon in claim 10. On the contrary, Applicant maintains that the use of dual lasers and a telecamera are clearly set forth in claim 10. Furthermore, as described at page 7 of the Specification, the correct positioning of the equipment with respect to the element being analysed may be based upon the overlap of the two spots projected by the recited dual lasers, along with their shape. Applicant does not seek to introduce the limitations of the Specification through such an argument, rather Applicant offers evidence of the advantages provided by the elements recited in claim 10 – particularly in response to the Examiner’s continued assertion that such limitations are a “mere duplication” involving only routine skill in the art. The recited limitation cannot be a “mere duplication” when it results in a noted advantage.

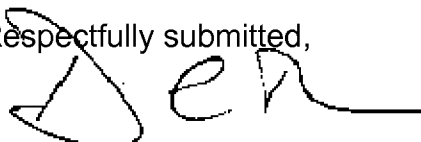
Claim 10 continues to be distinguishable over the arguable combination of Aslanov, Kikuchi and Fink as the claimed limitations are not disclosed by either reference. Nor do the references suggest the advantages arising from the claimed use of dual lasers. Applicant, therefore, respectfully traverses the rejection of claim 10.

In view of the foregoing remarks and amendments, entry of the proposed amendments and reconsideration of this application and allowance thereof are earnestly solicited. In the event that additional fees are required as a result of this response, including fees for

extensions of time, such fees should be charged to USPTO Deposit Account No. 50-2737 for Basch & Nickerson LLP.

In the event the Examiner considers personal contact advantageous to the timely disposition of this case, the Examiner is hereby authorized to call Applicant's attorney, Duane C. Basch, at Telephone Number (585) 899-3970, Penfield, New York.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'D. Basch', with a stylized flourish at the end.

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